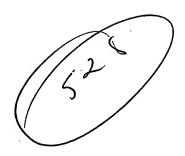
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LOGINID:ssspta1611sxp

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NEWS	1			Web Page URLs for STN Seminar Schedule - N. America
NEWS	2			"Ask CAS" for self-help around the clock
NEWS	3	Jun	03	New e-mail delivery for search results now available
NEWS	4	Aug	80	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS	5	Aug	19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS	6	Aug	26	Sequence searching in REGISTRY enhanced
NEWS	7	Sep	03	JAPIO has been reloaded and enhanced
NEWS		Sep		Experimental properties added to the REGISTRY file
NEWS	9	Sep	16	CA Section Thesaurus available in CAPLUS and CA
NEWS	10	Oct	01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS	11	Oct	24	BEILSTEIN adds new search fields
NEWS	12	Oct	24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS	13	Nov	18	DKILIT has been renamed APOLLIT
NEWS	14	Nov	25	More calculated properties added to REGISTRY
NEWS	15	Dec	0.4	CSA files on STN
NEWS	16	Dec	17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS	17	Dec	17	TOXCENTER enhanced with additional content
NEWS	18			Adis Clinical Trials Insight now available on STN
NEWS	19	Jan	29	Simultaneous left and right truncation added to COMPENDEX,
				ENERGY, INSPEC
NEWS				CANCERLIT is no longer being updated
NEWS				METADEX enhancements
NEWS				PCTGEN now available on STN
NEWS				TEMA now available on STN
NEWS				NTIS now allows simultaneous left and right truncation
NEWS				PCTFULL now contains images
NEWS				SDI PACKAGE for monthly delivery of multifile SDI results
NEWS				EVENTLINE will be removed from STN
NEWS NEWS				PATDPAFULL now available on STN
				Additional information for trade-named substances without structures available in REGISTRY
NEWS				Display formats in DGENE enhanced
NEWS		_		MEDLINE Reload
NEWS		-		Polymer searching in REGISTRY enhanced
NEWS				Indexing from 1947 to 1956 added to records in CA/CAPLUS
NEWS	3.4	Apr	21	New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
NEWS		-		RDISCLOSURE now available on STN
NEWS	36	May	05	Pharmacokinetic information and systematic chemical names added to PHAR
NEWS	37	May	15	MEDLINE file segment of TOXCENTER reloaded
NEWS	38	May		Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS	39	May	16	CHEMREACT will be removed from STN
NEWS	40	May	19	Simultaneous left and right truncation added to WSCA

10016280.1 Page 2

NEWS 41 May 19 RAPRA enhanced with new search field, simultaneous left and right truncation

NEWS 42 Jun 06 Simultaneous left and right truncation added to CBNB

NEWS 43 Jun 06 PASCAL enhanced with additional data

NEWS 44 Jun 20 2003 edition of the FSTA Thesaurus is now available

NEWS 45 Jun 25 HSDB has been reloaded

NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003

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FILE 'HOME' ENTERED AT 13:02:42 ON 30 JUN 2003

=> file reg COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

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STRUCTURE FILE UPDATES: 29 JUN 2003 HIGHEST RN 539790-82-4 DICTIONARY FILE UPDATES: 29 JUN 2003 HIGHEST RN 539790-82-4

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=>

10016280.1 Page 3

Uploading 10016280.1

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR

Structure attributes must be viewed using STN Express query preparation.

=> s l1

G1 Cb, Cy, Hy, Ak

SAMPLE SEARCH INITIATED 13:03:24 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 92 TO ITERATE

100.0% PROCESSED 92 ITERATIONS

11 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS:

1265 TO 2415

PROJECTED ANSWERS: 22 TO 418

L2 11 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 13:03:32 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 1825 TO ITERATE

100.0% PROCESSED 1825 ITERATIONS 176 ANSWERS

SEARCH TIME: 00.00.01

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COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION

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FULL ESTIMATED COST

148.15 148.36

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FILE COVERS 1907 - 30 Jun 2003 VOL 139 ISS 1 FILE LAST UPDATED: 29 Jun 2003 (20030629/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13 L4 7 L3 .

=> d 14 fbib hitstr abs total

L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2003 ACS

AN 2002:487536 CAPLUS

DN 137:63250

TI Quinazoline derivatives as inhibitors of human EFG tyrosine kinase

IN Himmelsbach, Frank; Langkopf, Elke; Blech, Stefan; Jung, Birgit; Baum, Elke; Solca, Flavio

PA Boehringer Ingelheim Pharma Kg, Germany

SO PCT Int. Appl., 64 pp. CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PAC	rent :	NO.		KIND		DATE			A.	PPLI	CATI	ON NO	ο.	DATE				
ΡI	WO									WO 2001-EP14569 20011212									
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	ΑU	2002019174			A5 200207			0701		AU 2002-19174 20011212									
										DE 2000-10063435A 20001220									

(prepn. of quinazoline derivs. as inhibitors of human EFG tyrosine kinase)

439081-40-0 CAPLUS RN

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(2S)-tetrahydro-2furanyl]methoxy]-6-quinazolinyl]-4-(dimethylamino)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Double bond geometry unknown.

439081-48-8 CAPLUS RN

2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-CN 6-quinazolinyl]-4-[(2-methoxyethyl)methylamino]- (9CI) (CA INDEX NAME)

IT 439081-20-6P 439081-21-7P 439081-22-8P 439081-24-0P 439081-25-1P 439081-27-3P 439081-28-4P 439081-31-9P 439081-32-0P 439081-36-4P 439081-37-5P 439081-38-6P

Page 6

439081-39-7P 439081-45-5P 439081-46-6P 439081-47-7P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of quinazoline derivs. as inhibitors of human EFG tyrosine kinase)

RN 439081-20-6 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2-furanyl)methoxy]-6-quinazolinyl]-4-(dimethylamino)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} O & CH_2-O & N\\ Me_2N-CH_2-CH-C-NH & NH\\ O & NH\\ \end{array}$$

RN 439081-21-7 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-3-furanyl)methoxy]-6-quinazolinyl]-4-(dimethylamino)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ \text{Me}_2\text{N}-\text{CH}_2-\text{CH} & \text{CH}-\text{C}-\text{NH} \\ & & \\ &$$

RN 439081-22-8 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-3-furanyl)methoxy]-6-quinazolinyl]-4-(diethylamino)- (9CI) (CA INDEX NAME)

Page 7

RN 439081-24-0 CAPLUS

CN 2-Butenamide, 4-[bis(2-methoxyethyl)amino]-N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2-furanyl)methoxy]-6-quinazolinyl]-(9CI) (CA INDEX NAME)

RN 439081-25-1 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2-furanyl)methoxy]-6-quinazolinyl]-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

Page 8

RN 439081-27-3 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[methyl[[(2R)-tetrahydro-2-furanyl]methyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 439081-28-4 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[methyl[[(2S)-tetrahydro-2-furanyl]methyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 439081-31-9 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(cyclopropylmethylamino)- (9CI) (CA INDEX NAME)

RN 439081-32-0 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[methyl[(tetrahydro-2H-pyran-4-yl)methyl]amino]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \text{CH}_2\text{-N-CH}_2\text{-CH} \\ \text{CH}_2\text{-NH} \\ \text{CH}_2\text{-NH} \\ \text{NH} \\ \text{CI} \\ \text{F} \end{array}$$

RN 439081-36-4 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)methoxy]-6-quinazolinyl]-4-(dimethylamino)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ \text{Me}_2\text{N}-\text{CH}_2-\text{CH} & \text{CH}-\text{C}-\text{NH} \\ & & & \\ \text{O} & & & \\ & & & \\ \end{array}$$

RN 439081-37-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)methoxy]-6-quinazolinyl]-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\$$

RN 439081-38-6 CAPLUS

CN 2-Butenamide, 4-[bis(2-methoxyethyl)amino]-N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)methoxy]-6-quinazolinyl]-(9CI) (CA INDEX NAME)

RN 439081-39-7 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(2R)-tetrahydro-2-furanyl]methoxy]-6-quinazolinyl]-4-(dimethylamino)- (9CI) (CA INDEX NAME)

RN 439081-45-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(2S)-tetrahydro-2-furanyl]methoxy]-6-quinazolinyl]-4-(ethylmethylamino)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 439081-46-6 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(2S)-tetrahydro-2-furanyl]methoxy]-6-quinazolinyl]-4-(diethylamino)- (9CI) (CA INDEX NAME)

Page 12

RN 439081-47-7 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(2S)-tetrahydro-2-furanyl]methoxy]-6-quinazolinyl]-4-[methyl(1-methylethyl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

GI

AB Quinazoline derivs. I [R = PhCH2, PhCHMe, 3,4-Cl(F)C6H3; R1 = NMeR2, NEt2, NEtCH2CH2OMe, N(CH2CH2OMe)2, morpholino; R2 = Me, Et, CHMe2, cyclopropyl, CH2CH2OMe, 3-tetrahydrofuryl, 2-tetrahydrofurylmethyl, 3-tetrahydrofurylmethyl, 4-tetrahydropyranyl, 4-tetrahydropyranylmethyl; R3 = cyclopropylmethoxy, cyclobutyloxy, cyclopentyloxy, 3-tetrahydrofuranyloxy, 2-tetrahydrofuranylmethoxy, 3-tetrahydrofuranylmethoxy, 4-tetrahydropyranyloxy, 4-tetrahydropyranylmethoxy] were prepd. for use as inhibitors of signal transduction caused by human EFG receptor tyrosine kinase. They are useful in the treatment of tumoral diseases, diseases of the lung and the respiratory tract, the gastrointestinal tract, and the gallbladder and bile ducts. Thus, the quinazoline II was prepd. by converting bromocrotonic acid to its chloride, and reaction with 4-[(3-chloro-4-fluorophenyl)amino]-6-amino-7-cyclopropylmethoxyquinazoline, followed by MeNHCH2CH2OMe. II had an IC50 against human EFG receptor kinase of 0.7 nM.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

Ι

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L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2003 ACS
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AN 2002:171892 CAPLUS

DN 136:216762

TI Preparation of 4-amino-6-heterocyclylcarbonylaminoquinazolines as epidermal growth factor receptor signal transduction inhibitors

IN Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Blech, Stefan; Solca, Flavio

PA Boehringer Ingelheim Pharma Kg, Germany

SO PCT Int. Appl., 53 pp. CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2002018376 A1 20020307 WO 2001-EP9536 20010818

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,

OS

IT

RN

CN

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LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
         PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
         US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
    RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
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DE 10042062
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EP 1315720
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                                            US 2000-230542PP 20000905
MARPAT 136:216762
402569-98-6P 402569-99-7P 402570-00-7P
402570-01-8P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
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(prepn. of (amino) (heterocyclylcarbonylamino) quinazolines as epidermal

2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-

6-quinazolinyl]-4-[(2R)-2-(methoxymethyl)-6-oxo-4-morpholinyl]- (9CI)

growth factor receptor signal transduction inhibitors)

Absolute stereochemistry.

Double bond geometry unknown.

INDEX NAME)

402569-98-6 CAPLUS

RN 402569-99-7 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2-oxo-1,9-dioxa-4-azaspiro[5.5]undec-4-yl)- (9CI) (CA INDEX NAME)

Patel

$$\begin{array}{c|c} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ &$$

RN 402570-00-7 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2S)-2-(methoxymethyl)-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 402570-01-8 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[2-(2-methoxyethyl)-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

IT 402569-87-3P 402569-89-5P 402569-90-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of (amino) (heterocyclylcarbonylamino) quinazolines as epidermal growth factor receptor signal transduction inhibitors)

RN 402569-87-3 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-[(2R)-2-hydroxy-3-methoxypropyl]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

RN 402569-89-5 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-[(tetrahydro-4-hydroxy-2H-pyran-4-yl)methyl]-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$$

RN 402569-90-8 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-[(2S)-2-hydroxy-3-methoxypropyl]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

GI

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AΒ
     Title compds. [I; X = N, (substituted) methynyl; R1 = H, Me; R2 =
     (substituted) Ph, PhCH2, 1-phenylethyl; R3 = H, Me; A = (substituted)
     vinyl, ethynyl, 1,3-butadien-1,4-yl; B = (substituted) alkenyl,
     alkenylcarbonyl, etc.; C = (substituted) 2-oxomorpholin-4-yl, etc; D =
     oxyalkenyl, O; E = (substituted) amino, alkenylimino, imidazolyl,
     cycloalkyl; or DE = H, (substituted) alkoxy, etc.], were prepd. Thus,
     4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-[N-(ethoxycarbonylmethyl)-N-((R)-
     2-hydroxy-3-methoxypropyl)amino]-1-oxo-2-buten-1-yl)amino]-7-
     cyclopropylmethoxyquinazoline (prepn. given) and MeSO2OH in MeCN were
     stirred for 4 h under reflux to give 69% 4-[(3-chloro-4-
     fluorophenyl)amino]-6-[(4-[(R)-2-methoxymethyl-6-oxomorpholin-4-yl]-1-oxo-
     2-buten-1-yl)amino]-7-cyclopropylmethoxyquinazoline. The latter inhibited
     epidermal growth factor (EGF)-dependent proliferation of F/L-HERc cells
     with IC50 = 2 nM. The invention relates to the use of the title compds.
     for treating tumor diseases, and lung and respiratory tract disorders.
RE.CNT 5
             THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
L4
     ANSWER 3 OF 7 CAPLUS COPYRIGHT 2003 ACS
ΑN
     2002:171889 CAPLUS
DN
     136:232315
ΤI
     Preparation of 4-amino-6-vinylcarbonylaminoquinazolines as epidermal
     growth factor receptor signal transduction inhibitors
     Himmelsbach, Frank; Langkopf, Elke; Jung, Birqit; Blech, Stefan; Solca,
IN
PA
     Boehringer Ingelheim Pharma Kg, Germany
SO
     PCT Int. Appl., 78 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     German
FAN.CNT 1
     PATENT NO.
                     KIND DATE
                                          APPLICATION NO.
                                                            DATE
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             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
             PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
             US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
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            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
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         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
                                           DE 2000-10042060A 20000826
                                           WO 2001-EP9537 W 200.10818
OS
    MARPAT 136:232315
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IT 402855-15-6P 402855-53-2P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. of (amino) (vinylcarbonylamino) quinazolines as epidermal growth factor receptor signal transduction inhibitors)

RN 402855-15-6 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-[(2S)-2-hydroxypropyl]-,
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 402855-53-2 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

IT 402855-16-7P 402855-17-8P 402855-18-9P 402855-19-0P 402855-33-8P 402855-35-0P 402855-46-3P 402855-47-4P 402855-48-5P 402855-49-6P 402855-51-0P 402855-52-1P 402855-54-3P 402855-70-3P 402855-71-4P 402855-73-6P 402855-74-7P 402855-75-8P 402855-76-9P 402855-77-0P RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of (amino) (vinylcarbonylamino) quinazolines as epidermal growth factor receptor signal transduction inhibitors) 402855-16-7 CAPLUS RN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-CN 6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-[(2R)-2-hydroxypropyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 402855-17-8 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(1,3-dioxolan-2-ylmethyl)methylamino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 402855-19-0 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(2-methoxyethoxy)-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

RN 402855-33-8 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2-furanyl)methoxy]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)-(9CI) (CA INDEX NAME)

RN 402855-35-0 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(5-ethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Et} \\ \\ \text{N-CH}_2\text{-CH} \\ \text{CH}_2\text{-CH} \\ \text{CH-C-NH} \\ \text{N} \\ \text{N} \\ \text{C1} \\ \text{F} \end{array}$$

$$\begin{array}{c|c} \text{Et} & & & \\ & \text{CH}_2\text{-}\text{O} & & \\ & \text{N}\text{--}\text{CH}_2\text{--}\text{CH}\text{--}\text{CH}\text{--}\text{C-NH} & \\ & \text{O} & & \\ & \text{NH} & & \\ & & \text{C1} & & \\ & & \text{F} & \\ \end{array}$$

RN 402855-46-3 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-3-furanyl)methoxy]-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-[(2R)-2-hydroxypropyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 402855-47-4 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-3-furanyl)methoxy]-6-quinazolinyl]-4-(2,2-dimethyl-6-oxo-4-morpholinyl)-(9CI) (CA INDEX NAME)

Page 24

RN 402855-48-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-3-furanyl)methoxy]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)-(9CI) (CA INDEX NAME)

RN 402855-49-6 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)methoxy]-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-[(2R)-2-hydroxypropyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 402855-51-0 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)methoxy]-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-[(2S)-2-hydroxypropyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 402855-52-1 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

RN 402855-54-3 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(3S)-3-methyl-2-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 402855-70-3 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-3-furanyl)methoxy]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]-(9CI) (CA INDEX NAME)

RN 402855-71-4 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)methoxy]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 402855-73-6 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)methoxy]-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]-(9CI) (CA INDEX NAME)

RN 402855-74-7 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-[(2R)-2-hydroxypropyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

$$\bigcap_{Me} \bigcap_{R} \bigcap_{N} \bigcap_{R} \bigcap_{R} \bigcap_{N} \bigcap_{R} \bigcap_{$$

RN 402855-75-8 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-(2-hydroxy-2-methylpropyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{OH } \text{HO}_2\text{C}-\text{CH}_2\\ \text{Me-C-CH}_2-\text{N-CH}_2-\text{CH-C-NH}\\ \text{Me} \end{array}$$

RN 402855-76-9 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-(2-hydroxy-1,1-dimethylethyl)-(9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{HO}_2\text{C}-\text{CH}_2\\ \text{Me}\\ \text{HO}-\text{CH}_2-\text{C}-\text{N}-\text{CH}_2-\text{CH}=\text{CH}-\text{C}-\text{NH}\\ \text{Me}\\ \end{array}$$

RN 402855-77-0 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-[(2R)-2-hydroxypropyl]-, methyl ester (9CI) (CA INDEX NAME)

GI

NHR1
NH-CO-CH=CH
$$\left\{CH_{2}\right\}$$
R2
n

AΒ Title compds. [I; R1 = PhCH2, 1-phenylethyl, (substituted) Ph; R2 = N-[(1,3-dioxolan-2-yl)methyl]methylamino, (substituted) R4OCOCH2NCH2CH2OH, 2-oxomorpholin-4-yl; R4 = H, alkyl; R3 = H, (alkoxy)alkoxy, cycloalkylalkoxy, tetrahydrofuran-3-yloxy, tetrahydropyran-3-yloxy, tetrahydropyran-4-yloxy, tetrahydrofuranylmethoxy, tetrahydropyranylmethoxy; n = 1-3], were prepd. Thus, a mixt. of 6-amino-4-[(3-chloro-4-fluorophenyl)amino]-7-cyclopropylmethoxyquinazoline (prepn. given) and disopropylethylamine in THF was dropwise treated under ice-cooling with BrCH2CH: CHCO2Cl (prepn. given) in CH2Cl2 followed by stirring for 1 h under ice-cooling and for 2 h at room temp. and addn. of (S)-(2-hydroxypropylamino)acetic acid tert-Bu ester in CH2Cl2 to give after stirring over night at room temp. and stirring for 5 h at 60.degree. 64% 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-[N-(tertbutyloxycarbonylmethyl)-N-((S)-2-hydroxyprop-1-yl)amino]-1-oxo-2-buten-1yl)amino]-7-cyclopropylmethoxyquinazoline. Several I inhibited epidermal growth factor (EGF)-dependent proliferation of F/L-HERc cells with IC50 = 0.02--15~nM. The invention relates to the use of the title compds. for treating tumor diseases, and lung and respiratory tract disorders. RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2003 ACS

AN 2001:762992 CAPLUS

DN 135:303907

TI Preparation of quinazolines as inhibitors of epidermal growth

ALL CITATIONS AVAILABLE IN THE RE FORMAT

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factor-mediated signal transduction.
     Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Blech, Stefan; Solca,
IN
PA
     Boehringer Ingelheim Pharma K.-G., Germany
SO
     PCT Int. Appl., 95 pp.
     CODEN: PIXXD2
DT
     Patent
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     German
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     PATENT NO.
                        KIND DATE
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                                                                    DATE
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     WO 2001077104
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                        A1
                                20011018
                                               WO 2001-EP3694 20010331
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
              CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
              HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
              LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
              RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
              VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
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              BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                                DE 2000-10017539A 20000408
                                                DE 2000-10040525A 20000818
     DE 10017539
                                20011011
                                                DE 2000-10017539 20000408
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                                              DE 2000-10040525 20000818
     DE 10040525
                         A1
                                20020228
                                                EP 2001-938076 20010331
     EP 1280798
                               20030205
                         Α1
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
                                                DE 2000-10017539A 20000408
                                                DE 2000-10040525A 20000818
                                                WO 2001-EP3694 W 20010331
PATENT FAMILY INFORMATION:
FAN 2001:747043
     PATENT NO.
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                                                APPLICATION NO. DATE
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     DE 10017539
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                                                DE 2000-10017539 20000408
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                                20011122
                                                US 2001-816003 20010323
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                                                DE 2000-10040525A 20000818
     WO 2001077104
                               20011018
                        A1
                                                WO 2001-EP3694 20010331
              AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
              DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
              BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                                DE 2000-10017539A 20000408
                                                DE 2000-10040525A 20000818
     EP 1280798
                               20030205
                         Α1
                                                EP 2001-938076 20010331
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
                                                DE 2000-10017539A 20000408
                                                DE 2000-10040525A 20000818
                                                WO 2001-EP3694 W 20010331
OS
     MARPAT 135:303907
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ΙT 365532-35-0P 365532-36-1P 365532-37-2P 365532-39-4P 365532-40-7P 365532-41-8P 365532-42-9P 365532-44-1P 365532-45-2P 365532-46-3P 365532-47-4P 365532-48-5P 365532-49-6P 367282-07-3P 367282-12-0P 367282-15-3P 367282-23-3P 367282-25-5P 367282-27-7P 367282-29-9P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of quinazolines as inhibitors of epidermal growth factor-mediated signal transduction) 365532-35-0 CAPLUS RN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-CN 6-quinazolinyl]-4-[4-(tetrahydro-2-oxo-3-furanyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & \\ & &$$

RN 365532-36-1 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[((2R)-tetrahydro-5-oxo-2-furanyl]methyl]-1-piperazinyl]- (9CI) (CA INDEX NAME)

$$\bigcap_{\mathbb{R}} \bigcap_{\mathbb{N}} \bigcap$$

RN 365532-37-2 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[methyl(tetrahydro-2-oxo-3-furanyl)amino]-1-piperidinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 365532-39-4 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-(tetrahydro-5-oxo-3-furanyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & \\ & &$$

RN 365532-40-7 CAPLUS

CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-3-[1-(tetrahydro-5-oxo-3-furanyl)-4-piperidinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 365532-41-8 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[((2S)-tetrahydro-5-oxo-2-furanyl]carbonyl]-1-piperazinyl]- (9CI) (CA INDEX NAME)

RN 365532-42-9 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[2-[(tetrahydro-2-oxo-3-furanyl)thio]ethyl]-1-piperazinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & & \\ & & & \\$$

RN 365532-44-1 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(3-oxo-2-oxa-8-azaspiro[4.5]dec-8-yl)- (9CI) (CA INDEX NAME)

RN 365532-45-2 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(hexahydro-3-oxopyrazino[2,1-c][1,4]oxazin-8(1H)-yl)-(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} C1 & F \\ \hline \\ O & N \\ \hline \\ O & N \\ \hline \\ CH_2-CH \\ \hline \\ CH_2-O \\ \hline \\ \end{array}$$

RN 365532-46-3 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(1-oxo-2-oxa-8-azaspiro[4.5]dec-8-yl)- (9CI) (CA INDEX NAME)

RN 365532-47-4 CAPLUS

Page 37

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(hexahydro-1-oxopyrazino[2,1-c][1,4]oxazin-8(1H)-yl)-(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$$

RN 365532-48-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[(tetrahydro-2-oxo-3-furanyl)thio]-1-piperidinyl]-(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 365532-49-6 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[(2,2-dimethyl-6-oxo-4-morpholinyl)methyl]-1-piperidinyl]- (9CI) (CA INDEX NAME)

RN 367282-07-3 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[methyl[1-(tetrahydro-2-oxo-3-furanyl)-4-piperidinyl]amino]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \text{N-CH}_2\text{-CH} \\ \text{CH-C-NH} \\ \text{O} \\ \text{NH} \\ \text{C1} \\ \text{F} \end{array}$$

RN 367282-12-0 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[methyl[1-[[(2S)-tetrahydro-5-oxo-2-furanyl]carbonyl]-4-piperidinyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A

PAGE 1-B

RN

367282-15-3 CAPLUS
2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[1-(tetrahydro-2-oxo-3-furanyl)-4-piperidinyl]- (9CI) CN (CA INDEX NAME)

Patel

<6/302003>

$$\begin{array}{c|c} & & & \\ &$$

RN 367282-23-3 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-(2-oxo-4-morpholinyl)-1-piperidinyl]- (9CI) (CA INDEX NAME)

RN 367282-25-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[(2R)-2-methyl-6-oxo-4-morpholinyl]-1-piperidinyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

Page 41

RN 367282-27-7 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(4-methyl-2-oxo-1-oxa-4,9-diazaspiro[5.5]undec-9-yl)-(9CI) (CA INDEX NAME)

RN 367282-29-9 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2-oxo-3-oxa-9-azaspiro[5.5]undec-9-yl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \end{array} \end{array} \begin{array}{c} \\ \\ \\ \end{array} \begin{array}{c} \\ \\ \\ \end{array} \begin{array}{c} \\ \\ \end{array} \begin{array}{c} \\ \\ \\$$

IT 367283-05-4 367283-07-6

RL: RCT (Reactant); RACT (Reactant or reagent) (prepn. of quinazolines as inhibitors of epidermal growth factor-mediated signal transduction).

RN 367283-05-4 CAPLUS

CN Glycine, N-[1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-4-piperidinyl]-N-(2-hydroxyethyl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 367283-07-6 CAPLUS

CN Glycine, N-[1-[4-[(4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-4-piperidinyl]-N-[(2R)-2-hydroxypropyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

$$\begin{array}{c|c} & & & \\ &$$

RN 290304-01-7 CAPLUS

CN 1-Piperazinecarboxylic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-,
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 365532-06-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-(methylamino)-1-piperidinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 365532-07-6 CAPLUS

CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-3-(4-piperidinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 365532-18-9 CAPLUS

CN Carbamic acid, [1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-

(cyclopropylmethoxy) -6-quinazolinyl]amino] -4-oxo-2-butenyl] -4piperidinyl]methyl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

t-BuO-C-N
$$\sim$$
 CH2-CH \sim CH2-O N \sim N \sim CH2-CH \sim N \sim

Page 45

RN 365532-19-0 CAPLUS

CN 1-Piperidinecarboxylic acid, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy) -6-quinazolinyl]amino] -3-oxo-1-propenyl] -, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN

367282-36-8 CAPLUS 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-CN6-quinazolinyl]-4-(methyl-4-piperidinylamino)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} Me & CH_2-O & N\\ \hline N-CH_2-CH-C-NH & N\\ O & NH \\ \hline \end{array}$$

RN 367282-44-8 CAPLUS

CN 1-Piperidinecarboxylic acid, 4-[[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]methylamino]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

GΙ

AB Title compds. [I; X = NCN, N; R1 = H, alkyl; R2 = (substituted) Ph, PhCH2, PhCH2CH2; R3 = H, alkyl; R4 = H, alkoxy, cycloalkoxy, cycloalkylalkoxy; A = (substituted) vinylene; B = bond, (fluoro)alkylene; D = substituted pyrrolidinyl, piperidinyl, piperazinyl, etc.], were prepd. Thus, 4-[(3-chloro-4-fluorophenyl)amino]-6-[[4-(piperazin-1-yl)-1-oxo-2-buten-1-yl]amino]-7-cyclopropylmethoxyquinazoline (prepn. given) in THF was

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Page 47
     treated with Et3N and then with 3-bromodihydrofuran-2-one in THF under ice
     cooling followed by stirring for 48 h at room temp. to give 56%
     4-[(3-chloro-4-fluorophenyl)amino]-6-[[4-[4-(2-oxotetrahydrofuran-3-
    yl)piperazin-1-yl]-1-oxo-2-buten-1-yl]amino]-7-
     cyclopropylmethoxyquinazoline. The latter inhibited epidermal growth
     factor (EGF)-dependent proliferation of F/L-HERC cells with IC50 = 0.05
    nM.
RE.CNT 5
             THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
    ANSWER 5 OF 7 CAPLUS COPYRIGHT 2003 ACS
     2001:747043 CAPLUS
     135:303901
     Bicyclic heterocycles as inhibitors of epidermal growth factor receptor
     mediated signal transduction
    Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Blech, Stefan; Solca,
     Flavio
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PA Boehringer Ingelheim Pharma KG, Germany

SO Ger. Offen., 28 pp.

CODEN: GWXXBX

DT Patent

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German LΑ

FAN.CNT 2

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PATENT NO.
                     KIND DATE
                                          APPLICATION NO.
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    DE 10017539
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                           20011011
                                          DE 2000-10017539 20000408
    US 2001044435
                      A1
                           20011122
                                          US 2001-816003
                                                           20010323
                                          DE 2000-10017539A 20000408
                                          DE 2000-10040525A 20000818
    WO 2001077104
                     A1
                           20011018
                                          WO 2001-EP3694
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            CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
            HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
            LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
            RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
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            BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
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                                          DE 2000-10040525A 20000818
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                                          EP 2001-938076 20010331
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                                          DE 2000-10040525A 20000818
                                          WO 2001-EP3694 W 20010331
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PATENT FAMILY INFORMATION:

FAN 2001:762992

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PATENT NO.
                    KIND
                          DATE
                                        APPLICATION NO. DATE
                          -----
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                         20011018
ΡI
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                    A1
                                        WO 2001-EP3694 20010331
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            LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
            RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
            VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
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10016280.1 Page 48

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG DE 2000-10017539A 20000408 DE 2000-10040525A 20000818 DE 10017539 20011011 Α1 DE 2000-10017539 20000408 DE 10040525 A1 20020228 DE 2000-10040525 20000818 EP 1280798 **A1** 20030205 EP 2001-938076 20010331 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR DE 2000-10017539A 20000408 DE 2000-10040525A 20000818 WO 2001-EP3694 W 20010331 MARPAT 135:303901

OS

IT 365532-35-0P 365532-39-4P 365532-42-9P 365532-45-2P 365532-47-4P 365532-48-5P 365532-49-6P

> RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of bicyclic heterocycles as inhibitors of epidermal growth factor receptor mediated signal transduction)

RN 365532-35-0 CAPLUS

2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-CN 6-quinazolinyl]-4-[4-(tetrahydro-2-oxo-3-furanyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 365532-39-4 CAPLUS

CN2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-(tetrahydro-5-oxo-3-furanyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)

RN 365532-42-9 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[2-[(tetrahydro-2-oxo-3-furanyl)thio]ethyl]-1-piperazinyl]- (9CI) (CA INDEX NAME)

RN 365532-45-2 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(hexahydro-3-oxopyrazino[2,1-c][1,4]oxazin-8(1H)-yl)-(9CI) (CA INDEX NAME)

RN 365532-47-4 CAPLUS

Page 50

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(hexahydro-1-oxopyrazino[2,1-c][1,4]oxazin-8(1H)-yl)-(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$$

RN 365532-48-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[(tetrahydro-2-oxo-3-furanyl)thio]-1-piperidinyl]-(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & &$$

RN 365532-49-6 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[(2,2-dimethyl-6-oxo-4-morpholinyl)methyl]-1-piperidinyl]- (9CI) (CA INDEX NAME)

Me
$$\sim$$
 CH2 \sim CH2 \sim CH2 \sim CH2 \sim CH2 \sim CH2 \sim NH \sim NH \sim NH \sim CH2 \sim CH2 \sim NH \sim NH \sim CH2 \sim CH2 \sim NH \sim NH \sim NH \sim CH2 \sim NH \sim NH

$$\begin{array}{c|c} & & & \\ &$$

RN 290304-01-7 CAPLUS

CN 1-Piperazinecarboxylic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-,

1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ & & \\ \text{CH}_2-\text{O} \\ & & \\ \text{CH}_2-\text{CH} \\ & & \\ \text{CH}_2-\text{CH}_2-\text{CH} \\ & & \\ \text{CH}_2-\text{CH}_2-\text{CH} \\ & & \\ \text{CH}_2-\text{$$

RN 365532-06-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-(methylamino)-1-piperidinyl]- (9CI) (CA INDEX NAME)

RN 365532-07-6 CAPLUS

CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-3-(4-piperidinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 365532-10-1 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-

Patel

6-quinazolinyl]-4-[1-(methylamino)-4-piperidinyl]- (9CI)

(CA INDEX NAME)

$$\begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \end{array} \end{array} \begin{array}{c} \\ \\ \\ \end{array} \begin{array}{c} \\ \\ \\ \end{array} \begin{array}{c} \\ \\ \end{array} \begin{array}{c} \\ \\ \\$$

Page 53

RN 365532-18-9 CAPLUS

CN Carbamic acid, [1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-4-piperidinyl]methyl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

t-BuO-C-N
$$\sim$$
 CH₂-CH=CH-C-NH \sim NH \sim Cl

RN 365532-19-0 CAPLUS

CN 1-Piperidinecarboxylic acid, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-3-oxo-1-propenyl]-,
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Page 54

RN 365532-21-4 CAPLUS

CN Carbamic acid, [4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-1-piperidinyl]methyl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} O & Me \\ \parallel & \parallel \\ \downarrow \\ L-BuO-C-N \\ \\ CH_2-CH = CH-C-NH \\ \\ O \\ \\ C1 \\ \end{array}$$

Absolute stereochemistry. Double bond geometry unknown.

RN 365532-37-2 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[methyl(tetrahydro-2-oxo-3-furanyl)amino]-1-piperidinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 365532-38-3 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[1-[methyl(tetrahydro-2-oxo-3-furanyl)amino]-4-piperidinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 365532-40-7 CAPLUS

CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-3-[1-(tetrahydro-5-oxo-3-furanyl)-4-piperidinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \end{array} \end{array} \begin{array}{c} \\ \\ \\ \end{array} \begin{array}{c} \\ \\ \\ \end{array} \begin{array}{c} \\ \\ \end{array} \begin{array}{c} \\ \\ \\$$

RN 365532-41-8 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[(2S)-tetrahydro-5-oxo-2-furanyl]carbonyl]-1-piperazinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 365532-43-0 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-(tetrahydro-2-oxo-3-furanyl)-1-piperidinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 365532-44-1 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(3-oxo-2-oxa-8-azaspiro[4.5]dec-8-yl)- (9CI) (CA INDEX NAME)

Page 58

RN 365532-46-3 CAPLUS

CN 2-Butenamide, N-'[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(1-oxo-2-oxa-8-azaspiro[4.5]dec-8-yl)- (9CI) (CA INDEX NAME)

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$$X = \begin{bmatrix} X & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ &$$

AB Bicyclic heterocycles I [X = N, CCN; R = substituted NH2; R1 = H, alkyl; R2 = acyl; R3 = H, (un)substituted alkoxy, cycloalkoxy, tetrahydrofuranyloxy, tetrahydrofuranyloxy, tetrahydrofuranyloxy, tetrahydrofuranylmethoxy, tetrahydropyranylmethoxy] were prepd. for use as inhibitors of tyrosine kinase-mediated signal transduction for treatment of tumors and diseases of the lung and airway. Thus, 4-[(3-chloro-4-fluorophenyl)amino]-7-fluoro-6-nitroquinazoline was treated with cyclopropylmethanol, followed by redn. to the amine, reaction with 4-bromocrotonic acid and N-tert.-butoxycarbonylpiperazine, and deblocking to give the quinazoline II. II had an IC50 for inhibition of epidermal growth factor dependent proliferation of 0.05 nM.

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L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS
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AN 2000:911231 CAPLUS

DN 134:71599

- TI Preparation of aminoquinazolines and aminoquinolines as epidermal growth factor receptor signal transduction inhibitors.
- IN Himmelsbach, Frank; Langkopf, Elke; Metz, Thomas; Solca, Flavio; Jung, Birgit; Baum, Anke
- PA Boehringer Ingelheim Pharma K.-G., Germany

SO PCT Int. Appl., 104 pp.

CODEN: PIXXD2

DT Patent

LA German

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PATENT NO.
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                                                             DATE
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314771-10-3P 314771-12-5P 314771-20-5P
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314771-28-3P 314771-31-8P 314771-32-9P
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314771-49-8P 314771-50-1P 314771-51-2P
314771-52-3P 314771-53-4P 314771-54-5P
314771-55-6P 314771-56-7P 314771-57-8P
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314771-65-8P 314771-67-0P 314771-68-1P
314771-69-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
BIOL (Biological study); PREP (Preparation); USES (Uses)
   (prepn. of aminoquinazolines and aminoquinolines as epidermal growth
   factor receptor signal transduction inhibitors)
314771-10-3 CAPLUS
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Page 61

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(dimethylamino)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ & & \\ \text{Me}_2\text{N}-\text{CH}_2-\text{CH} & \\ & & \\ & & \\ \text{C} & \\ & &$$

RN 314771-12-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(4-piperidinyl)- (9CI) (CA INDEX NAME)

RN 314771-20-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-bromophenyl)amino]-7-[(1-methyl-4-piperidinyl)methoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

RN 314771-21-6 CAPLUS

CN 2-Butenoic acid, 4-[[4-[(3-bromophenyl)amino]-7-[3-(1-methyl-4-piperidinyl)propoxy]-6-quinazolinyl]amino]-4-oxo-, ethyl ester (9CI) (CAINDEX NAME)

Page 62

RN 314771-26-1 CAPLUS

CN 2,4-Hexadienamide, N-[4-[(3-bromophenyl)amino]-7-[3-(1-methyl-4-piperidinyl)propoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

RN 314771-27-2 CAPLUS

CN 2-Butenamide, N-[4-[(3-bromophenyl)amino]-7-[3-(1-methyl-4-piperidinyl)propoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

RN 314771-28-3 CAPLUS

CN 2-Propenamide, N-[4-[(3-bromophenyl)amino]-7-[3-(1-methyl-4-piperidinyl)propoxy]-6-quinazolinyl]-3-phenyl- (9CI) (CA INDEX NAME)

RN 314771-31-8 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 314771-32-9 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(4-ethyl-1-piperazinyl)- (9CI) (CA INDEX NAME)

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$$\begin{array}{c|c} & & & \\ &$$

RN 314771-33-0 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2,6-dimethyl-4-morpholinyl)- (9CI) (CA INDEX NAME)

Me
$$CH_2-CH=CH-C-NH$$
 $CH_2-CH=CH-C-NH$
 $CH_2-CH-C-NH$
 $CH_2-CH-C-C-NH$
 CH_2-CH-

RN 314771-34-1 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(1-oxido-4-thiomorpholinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

10016280.1 Page 65

RN 314771-45-4 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[methyl(1-methyl-4-piperidinyl)amino]- (9CI) (CA INDEX NAME)

RN 314771-46-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2R)-2-(methoxymethyl)-1-pyrrolidinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Double bond geometry unknown.

RN 314771-47-6 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2S)-2-(methoxymethyl)-1-pyrrolidinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 314771-48-7 CAPLUS

CN 2-Butenamide, 4-[bis(2-methoxyethyl)amino]-N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]- (9CI) (CA INDEX NAME)

RN 314771-49-8 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[ethyl(2-methoxyethyl)amino]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ & & \\ \text{MeO-CH}_2\text{-CH}_2\text{-CH} \\ & & \\ \text{Et} & & \\ &$$

$$\begin{array}{c|c} & & & \\ & & & \\ & & \\ \text{MeO-CH}_2-\text{CH}_2-\text{N-CH}_2-\text{CH} \\ & & \\ \text{Et} & & \\ & &$$

RN 314771-50-1 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ & & \\ N - CH_2 - CH = CH - C - NH - NH \\ & & \\ O & & \\ & & \\ C1 & & \\ & &$$

RN 314771-51-2 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2-methyl-1-piperidinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ & & \\ N & \\ \text{CH}_2 - \text{CH} = \text{CH} - \text{C} - \text{NH} \\ & & \\ \text{NH} & & \\ &$$

RN 314771-52-3 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(1-pyrrolidinyl)- (9CI) (CA INDEX NAME)

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RN 314771-53-4 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-(cyclopropylmethyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 314771-54-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2-methyl-1-pyrrolidinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \text{Me} & & & \\ & \text{CH}_2\text{-O} & & \\ \text{N-CH}_2\text{-CH} & \text{CH-C-NH} & \\ \text{O} & & & \\ & \text{NH} & \\ & & & \\ \end{array}$$

Page 69

RN 314771-55-6 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[methyl(tetrahydro-2H-pyran-4-yl)amino]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \text{CH}_2\text{-}\text{CH}_2\text{-}\text{CH} \\ \text{N-}\text{CH}_2\text{-}\text{CH} \\ \text{CH} \\ \text{C} \\ \text{NH} \\ \text{C} \\ \text{C} \\ \text{R} \\ \text{F} \\ \end{array}$$

RN 314771-56-7 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2R,6S)-2,6-dimethyl-1-piperidinyl]-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Double bond geometry unknown.

RN 314771-57-8 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2,5-dimethyl-1-pyrrolidinyl)- (9CI) (CA INDEX NAME)

Page 70

$$\begin{array}{c} \text{Me} \\ \text{N-CH}_2\text{-CH-C-NH} \\ \text{N-CH}_2\text{-CH-C-NH} \\ \text{O} \\ \text{NH} \\ \text{Cl} \\ \text{F} \end{array}$$

RN 314771-58-9 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2-furanyl)methoxy]-6-quinazolinyl]-4-(diethylamino)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} O & CH_2-O & N \\ \hline \\ Et_2N-CH_2-CH-C-NH & NH \\ \hline \\ O & NH \\ \hline \\ C1 & F \\ \end{array}$$

RN 314771-60-3 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[(diethylamino)methyl]-1-piperidinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & \\ & &$$

RN 314771-61-4 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-

Patel

Page 71

6-quinazolinyl]-4-[(cyclopropylmethyl)methylamino]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \text{CH}_2\text{-N-CH}_2\text{-CH} \\ \text{CH}_2\text{-N-CH}_2\text{-C$$

RN 314771-62-5 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2-methoxycyclopropyl)methylamino]- (9CI) (CA INDEX NAME)

RN 314771-63-6 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(3-methoxypropyl)methylamino]- (9CI) (CA INDEX NAME)

Patel

Page 72

RN 314771-64-7 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(4-methoxy-1-piperidinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 314771-65-8 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(4-hydroxy-1-piperidinyl)- (9CI) (CA INDEX NAME)

RN 314771-67-0 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[methyl[(tetrahydro-2-furanyl)methyl]amino]- (9CI) (CA INDEX NAME)

RN 314771-68-1 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[methyl(tetrahydro-3-furanyl)amino]- (9CI) (CA INDEX NAME)

RN 314771-69-2 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2-methoxy-1-methylethyl)methylamino]- (9CI) (CA INDEX NAME)

GΙ

Patel

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NR?R?
ABCDE
R?
I
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AB Title compds. [I; Ra = H, alkyl; Rb = (substituted) Ph, PhCH2, PhCH2CH2; Rc = (substituted) cycloalkoxy, cycloalkylalkoxy; A = (alkyl-substituted) imino; B = CO, SO2; C = (substituted) allenylene, vinylene, butadienylene, ethynylene; D = (fluorinated) alkylene, carbonylalkylene, sulfonylalkylene, carbonyloxyalkylene, carbonyliminoalkylene, bond, etc.; E = amino, (substituted) alkylamino, dialkylamino, etc.], were prepd. Thus, 6-amino-4-[(3-bromophenyl)amino]-7-[3-(1-methylpiperidin-4-yl)propoxylquinazoline (prepn. given) in CH2Cl2 contg. Et3N at -10.degree. was treated with acryloyl chloride in THF to give 35% 4-[(3-bromophenyl)amino]-7-[3-(1-methylpiperidin-4-yl)propyloxy]-6-[(vinylcarbonyl)amino]quinazoline. The latter inhibited EGF-dependent proliferation of F/L HERC cells with IC50 = <0.35 nM.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS
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AN 2000:628125 CAPLUS

DN 133:207919

TI Preparation of 4-amino-quinazoline and quinoline derivatives having an inhibitory effect on signal transduction mediated by tyrosine kinases useful for treating tumoral diseases, lung and respiratory tract diseases

IN Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Metz, Thomas; Solca, Flavio; Blech, Stefan

PA Boehringer Ingelheim Pharma K.-G., Germany

SO PCT Int. Appl., 232 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

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PATENT NO.
                        KIND
                              DATE
                                               APPLICATION NO.
                        _ _ _ _
                               _____
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                        A1
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                                               WO 2000-EP1496
                                                                  20000224
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              CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
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                                               DE 1999-19928306A 19990621
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                                               DE 1999-19908567 19990227
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DE 1999-19954816A 19991113
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PATENT FAMILY INFORMATION:
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                                            JP 2000-602218
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US 1999-149329PP 19990817

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S	MARPAT 133:207919	02-19	-1B 200202 25 0	US 1999-149329PP 19990817 DE 1999-19954816A 19991113 WO 2000-EP1496 W 20000224	

IT 290302-11-3P 290302-19-1P 290302-25-9P 290302-39-5P 290302-47-5P 290302-98-6P 290303-04-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of aminoquinazoline and aminoquinoline derivs. having an inhibitory effect on signal transduction mediated by tyrosine kinases useful for treating tumoral diseases, lung and respiratory tract diseases)

RN290302-11-3 CAPLUS

CN1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 290302-19-1 CAPLUS

CN .beta.-Alanine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-(2-ethoxy-2-oxoethyl)-, ethyl ester (9CI) (CA INDEX NAME)

RN 290302-25-9 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & \\ & &$$

RN 290302-39-5 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(2-

Patel

Page 79

cyclopropylethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, ethyl ester
(9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & \\ & &$$

RN 290302-47-5 CAPLUS

CN L-Proline, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 290302-98-6 CAPLUS

CN Glycine, N-[2-(acetylthio)ethyl]-N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

Page 80

RN 290303-04-7 CAPLUS

CN Glycine, N-[2-(acetyloxy)ethyl]-N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & & & \\ & & & & \\ & & & \\ \text{EtO-C-CH}_2 - \text{N-CH}_2 - \text{CH-C-NH} \\ & & & \\ \text{AcO-CH}_2 - \text{CH}_2 \\ & & & \\ \end{array}$$

IT 290303-47-8P 290303-74-1P 290303-84-3P 290303-96-7P 290304-01-7P 290304-02-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of aminoquinazoline and aminoquinoline derivs. having an inhibitory effect on signal transduction mediated by tyrosine kinases useful for treating tumoral diseases, lung and respiratory tract diseases)

RN 290303-47-8 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(1-piperazinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ & & \\ N & \\ & & \\ N & \\ & & \\ CH_2-CH & \\ & & \\ CH_2-CH & \\ & & \\ CH_2-CH & \\ & & \\ & & \\ NH & \\ & & \\$$

RN 290303-74-1 CAPLUS

CN 2-Butenoic acid, 4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl)amino]-4-oxo-(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 290303-84-3 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-[2-[(methylsulfonyl)oxy]ethyl]-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ O \\ We-S-O-CH_2-CH_2-N-CH_2-CH-C-NH \\ O \\ EtO-C-CH_2 \\ O \\ \end{array}$$

RN 290303-96-7 CAPLUS

CN 2-Butenoic acid, 4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-

Patel

Page 82

(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-, ethyl ester (9CI) (CAINDEX NAME)

RN 290304-01-7 CAPLUS

CN 1-Piperazinecarboxylic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-,
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ & & \\ \text{CH}_2-\text{O} & & \\ & & \\ \text{CH}_2-\text{CH} & \\ & & \\ \text{CH}_2-\text{CH} & \\ & & \\ \text{CH}_2-\text{CH} & \\ & & \\ & & \\ \text{CH}_2-\text{CH} & \\ &$$

RN 290304-02-8 CAPLUS

CN 1,3-Piperazinedicarboxylic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, 1-(1,1-dimethylethyl) 3-ethyl ester (9CI) (CA INDEX NAME)

IT 290303-13-8P

RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. of aminoquinazoline and aminoquinoline derivs. having an inhibitory effect on signal transduction mediated by tyrosine kinases useful for treating tumoral diseases, lung and respiratory tract diseases)

RN 290303-13-8 CAPLUS

CN 2-Piperazinecarboxylic acid, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ & & \\ N - CH_2 - CH = CH - C - NH \\ & & \\ C - OEt \\ & & \\ O \end{array}$$

IT 290301-79-0P 290301-80-3P 290301-81-4P 290301-82-5P 290301-85-8P 290302-09-9P 290302-15-7P 290302-21-5P 290302-35-1P 290302-37-3P 290302-37-3P 290302-37-3P 290302-43-1P 290302-45-3P 290302-49-7P 290302-51-1P 290302-53-3P 290302-55-5P 290302-57-7P 290302-65-7P 290302-61-3P 290302-63-5P 290302-65-7P 290302-67-9P 290302-81-7P 290302-89-5P 290302-91-9P 290302-93-1P 290302-94-2P 290303-00-3P 290303-02-5P 290303-03-6F

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RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of aminoquinazoline and aminoquinoline derivs. having an inhibitory effect on signal transduction mediated by tyrosine kinases useful for treating tumoral diseases, lung and respiratory tract diseases)

RN 290301-79-0 CAPLUS

CN Glycine, N-[7-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4,7-dioxo-5-heptenyl]-N-methyl-, ethyl ester (9CI) (CA INDEX NAME)

RN 290301-80-3 CAPLUS

CN Glycine, N-[6-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-3,6-dioxo-4-hexenyl]-N-methyl-, ethyl ester (9CI) (CA INDEX NAME)

RN 290301-81-4 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-1,4-dioxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

RN 290301-82-5 CAPLUS
CN L-Proline, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7(cyclopropylmethoxy)-6-quinazolinyl]amino]-1,4-dioxo-2-butenyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 290301-85-8 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-bromophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-,

[[(1,1-dimethylethoxy)carbonyl]oxy]methyl ester (9CI) (CA INDEX NAME)

RN 290302-09-9 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-methyl-, ethyl ester (9CI) (CA INDEX NAME)

RN 290302-15-7 CAPLUS

CN Propanedioic acid, [[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]methylamino]-, dimethyl ester (9CI) (CA INDEX NAME)

RN 290302-21-5 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl)amino]-4-oxo-2-butenyl]-,

1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 290302-23-7 CAPLUS

CN .beta.-Alanine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-(3-ethoxy-3-oxopropyl)-, ethyl ester (9CI) (CA INDEX NAME)

RN 290302-27-1 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-(2-hydroxyethyl)-, ethyl ester (9CI) (CA INDEX NAME)

Page 88

RN 290302-29-3 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclohexylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 290302-35-1 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclobutylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

Page 89

RN 290302-37-3 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopentylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 290302-43-1 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-(2-hydroxy-2-methylpropyl)-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & &$$

RN 290302-45-3 CAPLUS

CN 2-Piperidinecarboxylic acid, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, methyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ & & \\ \text{CH}_2-\text{CH} & \\ \text$$

RN 290302-49-7 CAPLUS

CN Glycine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-(2-methoxy-2-oxoethyl)-, methyl ester (9CI) (CA INDEX NAME)

RN 290302-51-1 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

Page 91

RN 290302-53-3 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(5-methyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \text{N---} \text{CH}_2\text{---} \text{CH} \\ \text{CH}_2\text{---} \text{CH} \\ \text{O} \\ \text{NH} \\ \text{O} \\ \text{C1} \\ \text{F} \\ \end{array}$$

RN 290302-55-5 CAPLUS

CN D-Proline, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 290302-57-7 CAPLUS

CN 2,5-Pyrrolidinedicarboxylic acid, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, diethyl ester, (2R,5S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Double bond geometry unknown.

RN 290302-59-9 CAPLUS

CN 2,6-Piperidinedicarboxylic acid, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, dimethyl ester, (2R,6S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Double bond geometry unknown.

RN 290302-61-3 CAPLUS

CN 2,6-Piperidinedicarboxylic acid, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, dimethyl ester, (2R,6R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Double bond geometry unknown.

RN 290302-63-5 CAPLUS

CN 2,5-Pyrrolidinedicarboxylic acid, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, dimethyl ester, (2R,5S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Double bond geometry unknown.

RN 290302-65-7 CAPLUS

CN 2,5-Pyrrolidinedicarboxylic acid, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, dimethyl ester, (2R,5R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry. Double bond geometry unknown.

Page 94

RN 290302-67-9 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-1-methyl-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

RN 290302-71-5 CAPLUS

CN Alanine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-methyl-, methyl ester (9CI) (CA INDEX NAME)

RN 290302-73-7 CAPLUS

CN L-Proline, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, phenylmethylester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 290302-81-7 CAPLUS

CN 2-Piperidineacetic acid, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ & & \\ N - CH_2 - CH = CH - C - NH - NH \\ & & \\ CH_2 - C - OEt \\ & & \\ C1 & & \\$$

RN 290302-83-9 CAPLUS

CN Alanine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-(2-ethoxy-2-oxoethyl)-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & \\ EtO-C-CH-N-CH_2-CH-CH-C-NH \\ & & & \\ &$$

RN 290302-89-5 CAPLUS

CN D-Alanine, N-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-N-(2-hydroxyethyl)-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

Page 97

RN 290302-91-9 CAPLUS

CN 1H-1,4-Diazepine-1-acetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]hexahydro-, ethyl ester (9CI) (CA INDEX NAME)

EtO-C-CH2 N-CH2-CH=CH-C-NH NH
$$\sim$$
 Cl \sim Cl \sim Cl \sim Cl \sim CH2- \sim

RN 290302-93-1 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[methyl(tetrahydro-2-oxo-3-furanyl)amino]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & & \\ & & & \\$$

RN 290302-94-2 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[methyl(tetrahydro-5-oxo-3-furanyl)amino]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ &$$

RN 290303-00-3 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & \\ & &$$

RN 290303-02-5 CAPLUS

Page 99

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2,2-dimethyl-6-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \text{Me} & \text{Me} \\ \hline \\ \text{O} & \text{CH}_2\text{-}\text{CH} \\ \hline \\ \text{CH}_2\text{-}\text{CH}_2\text{-}\text{CH} \\ \hline \\ \text{CH}_2\text{-}\text{CH}_2\text{-}\text{CH} \\ \hline \\ \text{CH}_2\text{-}\text{CH}_2\text$$

RN 290303-03-6 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(3R)-3-methyl-2-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

RN 290303-05-8 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

RN 290303-06-9 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, phenyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & \\ & &$$

RN 290303-07-0 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, 2,3-dihydro-1H-inden-5-yl ester (9CI) (CA INDEX NAME)

RN 290303-08-1 CAPLUS

Page 101

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, cyclohexylmethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & \\ & &$$

RN 290303-09-2 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, octyl ester (9CI) (CA INDEX NAME)

RN 290303-10-5 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, hexyl ester (9CI) (CA INDEX NAME)

Me-
$$(CH_2)_5$$
-O-C- CH_2
O
N- CH_2 -CH- CH_2
O
NH
O
C1
F

RN 290303-11-6 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-3-(ethoxycarbonyl)-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \text{EtO-C-CH}_2 \\ \text{O} \\ \text{N-CH}_2\text{-CH-C-NH-CH} \\ \text{C-OEt} \\ \text{O} \\ \end{array}$$

RN 290303-12-7 CAPLUS

CN 1-Piperazinebutanoic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

RN 290303-14-9 CAPLUS

Page 103

CN 2-Piperazinecarboxylic acid, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-4-methyl-, ethyl ester (9CI) (CA INDEX NAME)

RN 290303-15-0 CAPLUS

CN 2-Piperazinecarboxylic acid, 1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-4-(methylsulfonyl)-, ethyl ester (9CI) (CA INDEX NAME)

RN 290303-16-1 CAPLUS

CN 1-Piperazinepropanoic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} & & & & \\ & & & \\$$

RN 290303-17-2 CAPLUS

CN 1-Piperazineacetic acid, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-1,1-dimethyl-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

RN 290303-18-3 CAPLUS

CN 2-Piperazinecarboxylic acid, 4-acetyl-1-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]amino]-4-oxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

GΙ

Title compds. [I; R1 = H, C1-C4-alkyl; R2 = (un)substituted Ph, benzyl, 1-phenylethyl; R3, R4 independently = H, F, C1, CH3O, CH3OCH2, (CH3)2NCH2, (CH3CH2)2NCH2, pyrrolidino, piperidino, morpholino; X = C(CN), N; A = O, NH, (C1-C4)-alkylN; B = CO, SO2; C = 1,3-allenylene, 1,1-vinylene, 1,2-vinylene, 1,3-butadien-1,4-ylene, with CH3, CF3 substitution; D = alkylene, CO-alkylene, SO2-alkylene; CO, SO2; E = HOCO(CH2)nNR5, (HO)2P(:O)(CH2)nNR5; n = 1-6; R5 = H, alkyl], tautomers, stereoisomers, and physiol. acceptable salts are prepd. and having valuable pharmacol. properties, particularly an inhibiting effect on signal transduction mediated by tyrosine kinases. Title compds. are useful for treating tumoral diseases, diseases of the lungs and respiratory tract. Thus, the title compd. II was prepd. and tested by Cell Titer 96TM Aq. Nonradioactive Cell Proliferation Assay.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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DISPLAY CHARGES	47.49	47.49
	47.89	196.25
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Page 106

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